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SUCCESS FACTORS OF MSMES IN COLOMBIA

FACTORES DE ÉXITO EN EMPRENDIMIENTOS DE MIPYMES EN COLOMBIA

Hugo Fernando Castro-Silva[1], Fernando Rodríguez-Fonseca[2] & Yamith Alfonso Martínez-Chaparro[3]

[1]Universidad Pedagógica y Tecnológica de Colombia. ***Email***: hugofernando.castro@uptc.edu.co
[2]Universidad Pedagógica y Tecnológica de Colombia. ***Email:*** fernando.rodriguez@uptc.edu.co
[3]Universidad Pedagógica y Tecnológica de Colombia. ***Email:*** yamith.martinez@uptc.edu.co

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ABSTRACT

Keywords: entrepreneurship; general business administration; social entrepreneurship; business; economy.

The importance of the micro-, small-, and medium-sized enterprises (MSMEs) sector in the economic and social development of a country is increasingly evident. Despite the promotion of MSMEs, the startup failure rates during the first years of operation are high. This empirical and descriptive study aims to provide a clearer understanding of the influencing factors of the success of startups, including those favored with seed capital from the national government, according to the perception of the owners/managers of these companies. The methodological design of the research contemplates a systematic literature review and two stages that incorporate quantitative and qualitative approaches. The results indicate that the relationship among finance and business networks, strategic planning, product and service innovation, supply chain management, and financing decisions significantly influence the enterprise success beyond the first two years of operation. The main contribution of this work is that it is one of the few that focuses on the entrepreneur's direct perceptions and not on aggregate economic data.

RESUMEN

Palabras clave: emprendimiento; administración de negocios; emprendimiento social; economía; negocios.

JEL: L26; L31; M10; M20.

La importancia del sector de la micro, pequeña y mediana empresa (MIPYME) en el desarrollo económico y social de un país es cada vez más evidente. A pesar del fomento a los emprendimientos de MIPYMEs, las tasas de fracaso durante los primeros años de funcionamiento son elevadas. Este estudio empírico y de corte descriptivo tiene como objetivo desarrollar una comprensión más clara de los factores que influyen en el éxito de los emprendimientos, incluidos los favorecidos con capital semilla del gobierno nacional, según la percepción de los propietarios-gerentes de estas empresas. El diseño metodológico de la investigación contempla una revisión sistemática de la literatura y dos etapas que incorporan enfoques cuantitativos y cualitativos. Los resultados indican que la relación entre finanzas y redes de negocios, la planificación estratégica, la innovación de productos y servicios, la gestión de la cadena de suministros y las decisiones de financiación influyen significativamente en el éxito del emprendimiento más allá de los dos primeros años de funcionamiento. El aporte principal de este trabajo es que es uno de los pocos que se orientan a las percepciones directas del emprendedor y no en datos económicos agregados.

INTRODUCTION

The positive impact of setting up new businesses on the economic and social development of nations, especially job creation, is well established and entrepreneurship is becoming increasingly important in the government agendas of developing countries (Audretsch & Keilbach, 2004; Global Entrepreneurship Monitor [GEM], 2016; Schaper, 2006). In the case of Colombia, the rate of entrepreneurial activity during the last ten years has been above 20 %, placing it in the top eight worldwide and below Chile and Ecuador in Latin America (GEM, 2016). This gives us an idea of the importance of creating new companies for the country's economy.

This study focuses on identifying the motivations for starting a new business, the critical entrepreneurship success factors, and the main problems faced by entrepreneurs in the Colombian context. However, this paper includes partial results of this research, particularly in the context of the Sugamuxi Province, located in one of the most important industrial corridors in Colombia. According to entrepreneurship statistics collected by its Chamber of Commerce, 9,933 new companies were created in 2017 and 6,675 companies went out of business (Gobernación de Boyacá - Colombia, 2018). This worrying business failure index supports the importance of studies that identify both the problem of new companies' survival and the key success factors of these startups.

The GEM model determines that strong entrepreneurship systems have seven components (Regele & Neck, 2012): 1) access to business financing; 2) entrepreneurship programs managed by the government; 3) business education; 4) favorable policies for transfer R and D; 5) legal infrastructure; 6) commercial infrastructure, and 7) ease of entry rules to start a business. An analysis of these components for the United States concludes that emphasis should be placed on the education subsystem, developing a program network that is concertedly coupled to maximize entrepreneurial attitudes and activity, not only at the higher education level but also in elementary and high school (Regele & Neck, 2012).

By researching the individual factors that favor entrepreneurship in emerging economies, Lim *et al*. (2016) managed to identify that the entrepreneur's family income directly affects their entrepreneurial spirit. In contrast, these same authors ensure that the institutional factors of emerging economies do not influence the propensity for entrepreneurship. The educational level of entrepreneurs is significant depending on the institutional factors of each country (Lim *et al*., 2016). In the case of Turkey, empirical research has found factors that favor entrepreneurship such as 1) being a man; 2) being young; 3) high family income, and 4) having met an entrepreneur in the past two years. Meanwhile, the factors that limit entrepreneurship are 1) high academic level and 2) fear of failure (Tunali & Sener, 2019).

Likewise, the impact of the personal characteristics of the entrepreneur on the success of new companies has also been explored, such as García *et al*. (2010) who, based on the analysis of statistically significant differences in variables related to personality traits among the individuals who decide to start a business creation and those who do not, prepared a general profile of the Spanish entrepreneur, which includes 1) not being afraid of failure; 2) knowing how to identify good business opportunities in the environment; 3) considering gaining the knowledge and skills necessary to create and run a new business, and 4) having personally known some entrepreneur in recent years.

METHODOLOGY

The objectives of this study are to identify the key success factors associated with Colombian enterprises specifically located in Sugamuxi, Colombia and to establish whether there are significant differences between these enterprises and those identified as favored with seed capital from the government of Colombia. This research seeks to test hypotheses related to the environmental and personality factors of entrepreneurs, which determine the success of new small businesses in Colombia. To test the hypotheses, a method proposed by Hernández *et al*. (2010) for non-experimental quantitative research was implemented, which includes the design of data collection instruments, data collection, and statistical analysis. Likewise, the variables derived from the specific objectives proposed in search of an approach to the facts linked and related to the entrepreneurship context in Colombia were analyzed for the present study. The methodological design is within the causal category considering that it intends to determine the influence of certain independent variables on a dependent variable, in this case, the startup success (Ouellet & Rodriguez, 2001).

Building on a database provided by the Sugamuxi Chamber of Commerce containing existing MSMEs in 2018 and those created during the period between 2012 and 2016, a simple random sampling is applied to obtain a resulting sample size of 67 companies based on the recommendations of Spiegel & Stephens (2018) for a maximum variability scenario, that is, with $p = q = 0.5$, a level of significance of 5 %, and a maximum estimation error of 0.10 (e). As for the businesses favored with seed

capital from government funds, a database of 34 existing companies in 2018 provided by the entity in charge of this allocation is taken.

To support the reliability of the results for the organizations selected to form the sample, this research uses the same method as Benzing *et al*. (2009), including the adaptation of Chu and Katsioloudes' questionnaire (2002) to the Colombian context. It is also used in other research related to success factors (Benzing *et al*. 2005; Chu *et al*., 2007), which argue that the motivations and problems of entrepreneurs are similar in developing countries and developed countries.

The questionnaire comprises four sections: the first contains entrepreneur's sociodemographic data; the second, consisting of 11 questions, is devoted to identifying the motivations for entrepreneurship; the third section, composed of 17 questions, evaluates key success factors, and the fourth section identifies the main problems faced by entrepreneurs. Three variables were considered for the design of the information collection instrument: 1) the entrepreneur's motivation; 2) success perceived by the entrepreneur, and 3) problems faced by the entrepreneur. The entrepreneur assessed these three variables according to a measurement scale of 1 to 5 points, similar to a Likert scale, as presented in Table 1.

Table 1. Rating scale of variables.

Assessment	Variable		
	Motivation to create a company.	**Key success factors of the enterprise.**	**Problems faced by the entrepreneur.**
1	Not at all important	Not at all important	No problem
2	Slightly important	Slightly important	Minor problem
3	Important	Important	Common problem
4	Fairly important	Fairly important	Serious problem
5	Very important	Very important	Very serious problem

Source: Own elaboration based on Benzing *et al*. (2009).

The reliability of the information collection instrument was considered satisfactory, taking into account that the Cronbach's coefficient alpha and the Guttman split-half coefficient were high (between 0.751 and 0.895) for items of the motivation, perceived success, and faced problems sections. Considering a non-response rate, surveys were sent to 80 MSME managers and 32 managers of companies favored with seed capital, obtaining responses from 64 and 12, respectively.

For the data analysis, the R® software was used. Considering the ordinal nature of the variables and that they are not under a normal distribution, the Wilcoxon rank-sum test was used to determine significant differences among the variable scores. After performing a descriptive analysis of each variable in each of the questionnaire sections, a principal component analysis was applied to determine the existence of significant groups within the motivation, success factors, and faced problems sections. The next section of this document presents the results of these analyses.

RESULTS

This section discusses the results of the statistical analyses performed on the data set; first, a demographic description of the sample is presented and then the descriptive and main component analyses are emphasized for the variables that make up the sections of motivation, key success criteria, and problems faced by the managers of the MSMEs participating in the study.

Sample demographic análisis

All the managers of the sample run MSMEs with more than two years of operation in Sugamuxi. Their demographic variables are summarized as follows: 1) 84.21 % of the companies have not been beneficiaries of seed capital from funds of the Colombian state; 2) 55.26 % of the participants are males; 3) regarding educational level, 2.7% have elementary studies, 18.9% have obtained a high school diploma or a technologist's degree; 47.3% have obtained a university degree, 25% have postgraduate studies, and the remaining 5.4% did not answer the question; 4) as for the age distribution of entrepreneurial managers, 6.8% are under 25, 28.4% are between 25 and 34, 37.4% are between 35 and 44, 14.9% are between 45 and 55, and the remaining 12.2% are over 55, and 5) 33.8% correspond to transformation companies, while the remaining 66.2% are service companies.

Entrepreneurs' motivations

Entrepreneurial managers were asked to evaluate the motivations that led them to set up a company. The instrument for gathering information considered 11 different causes, which entrepreneurs evaluated on a 1-5 Likert scale. The evaluation results are presented in Table 2, which shows that the two better-evaluated causes were to "increase income" and to "ensure long-term job stability." The results reveal that at 95 % confidence, it can be affirmed that the average scores of these two motivations are significantly higher than the average scores of the other causes of entrepreneurship.

The study of entrepreneurial activity in Colombia conducted by the GEM identified two categories of motivations for the creation of companies: by chance and out of necessity. The GEM (2016) report concludes that entrepreneurship out of necessity is significantly higher in Colombia than in other Latin American countries. Likewise, entrepreneurship motivated by necessity is higher compared to economies driven by factors, efficiency, and innovation (GEM, 2016). In this way, the results of this study, derived from the entrepreneurs' perception, are coherent with the results of the 2016 GEM report for Colombia, which can be explained by the high rates of unemployment and underemployment in Colombia and job instability in this country.

Table 2. Descriptors of the motivation variables.

Motivation to start an enterprise	Mean	Standard deviation
1. Be my own boss	3.71	1.04
2. Be able to use my previous experience and training	3.21	1.52
3. Prove that I can do it	2.98	1.33
4. Increase my income	4.61	0.96
5. Provide jobs to family members	3.94	1.15
6. For my own satisfaction and growth	3.43	1.37
7. Ensure long-term job stability	4.16	1.11
8. Build up an enduring business	3,93	1.44
9. Have a flexible schedule and maintain my freedom	3.80	1.12
10. Have more time and be closer to the family	3.21	1.19
11. For fun	2.02	1.31

Source: Own elaboration based on Benzing *et al*. (2009).

When performing the principal component statistical procedure, the result of the eigenvalues associated with the number of factors explain the total data variability for the motivation variables. So the eigenvalue for a factor is 4.64 and explains a total of 42.25 % of the data variability, while for a total of four factors, the eigenvalue is 0.782 explaining 78.06 % of the total data. We decided to group the motivation variables in three components. To locate each of the motivation variables within the resulting components, we consaidered the communalities and cosines squared that are presented in Table 3.

Table 3. Results of the principal components for the motivation variables to create a company.

Motivation to start an enterprise	C1	C2	C3
1. Be my own boss	0.205	0.001	0.951
2. Be able to use my previous experience and training	0.147	0.002	0.755
3. Prove that I can do it	0.129	0.009	0.886
4. Increase my income	0.016	0.689	0.312
5. Provide jobs to family members	0.906	0.102	0.001

6. For my satisfaction and growth	0.736	0.010	0.601
7. Ensure long-term job stability	0.486	0.013	0.034
8. Build up an enduring business	0.322	0.736	0.067
9. Have a flexible schedule and maintain my freedom	0.104	0.222	0.765
10. Have more time and be closer to the family	0.636	0.469	0.266
11. For fun	0.160	0.212	0.025

Source: Own elaboration based on Benzing *et al*. (2009).

As evidenced in Table 3, Component 1 (C1), called "income" includes increasing income and building up an enduring business as motivations to create a company. Component 2 (C2) is called "security," and groups motivations aimed at achieving work autonomy such as providing jobs to the family, ensuring long-term job stability, and having more time for the family. The last identified Component (C3) gathers the other variables related to "labor independence," such as having a flexible schedule, being one's own boss, using the acquired experience and training, and proving to be capable of starting an enterprise.

Critical success factors of an enterprise

In this section, we also considered the 17 critical success factors of an enterprise established by Chu and Katsioloudes (2002). Table 4 summarizes the descriptors associated with each of these factors according to the perception of the participating managers. These factors are associated with the environment of the new company as well as the entrepreneur's characteristics. As noted in Table 4, the critical success factors associated with the organization's environment that got a higher average rating were relying on a good product or service at a competitive price, financial and business network management, supply chain management, and good strategic planning. Regarding the factors associated with personal characteristics, the highest rating is related to the entrepreneur's reputation and honesty. At 95 % confidence, it can be affirmed that the average scores of these five factors are significantly higher than the ratings of the other considered critical success factors. It is also worth highlighting the low average rating of factors associated with government support and access to capital. This is consistent with the results of the 2016 GEM, which concludes that financial support for entrepreneurship is a major weakness at the national level (GEM, 2016).

Table 4. Descriptors of key success factors of an enterprise.

Key success factor of an enterprise	Mean	Standard deviation
1. Good management and leadership skills	3.37	0.77
2. Good financial and business network management	4.28	1.33
3. Satisfactory government support	2.97	0.82
4. Appropriate training	4.00	1.18
5. Access to capital	3.02	0.75
6. Previous business experience	3.78	0.83
7. Support from family and friends	3.15	0.78
8. Marketing/sales promotion	3.46	1.21
9. Good product/service at a competitive price	4.32	1.15
10. Good supply chain management	4.15	0.75
11. Hard work	3.76	1.12
12. Position in society	3.35	0.72
13. Maintenance of accurate records	3.38	0.86
14. Ability to manage personnel	3.81	0.88
15. Strategic planning	4.23	1.43
16. Political involvement	3.60	0.85
17. Reputation for honesty	4.26	0.92

Source: Own elaboration based on Benzing *et al*. (2009).

The principal component analysis shows that selecting an association of 15 of the 17 critical success factors in four components could explain 78.7 % of the total variability of these variables. By analyzing the cosines squared of each of the variables and communalities, it is possible to assign them to the resulting component. Component 1, called "organization management," includes key success factors such as good financial management, strategic planning, and marketing of the new company. Component 2, called "entrepreneur's characteristics," involves the reputation variables of honesty, hard work, ability to manage personnel, and good management and leadership skills. Component 3, called "social relations," lists variables such as a position in society and political involvement. Finally, Component 4, called "support for the entrepreneur," is made up of critical success criteria such as government support, support from relatives and friends, and ease of access to capital.

Problems faced by entrepreneurs

This last section of the questionnaire collects the perceptions of managers concerning the main problems they have faced in creating and managing new companies. Figure 1 summarizes the statistical descriptors associated with the managers' assessment results in relation to the importance they attach to such problems. As shown, the most important problems are those related to economic uncertainty and complexity, the national legislation, and the tax code, in addition to the problems related to obtaining both short- and long-term funding. These results are consistent with the findings of the GEM study for Colombia in the 2015-2016 period (GEM, 2016). However, the Wilcoxon rank-sum test confirms significant differences only for the variables of poor economic performance and complex and confusing tax structure.

For the three sections, we compared the average scores of each of the variables associated with the motivations for creating a startup, critical success factors, and problems faced by entrepreneurs in the population of enterprises favored with seed capital from Colombian government funds and the new companies that did not have this benefit. The analysis of variance tests allows us to conclude that there is no significant difference in the average scores between the two considered populations. Therefore, it can be concluded that in the case of Sugamuxi, the managers' perceptions are not affected by access to seed capital from government funds.

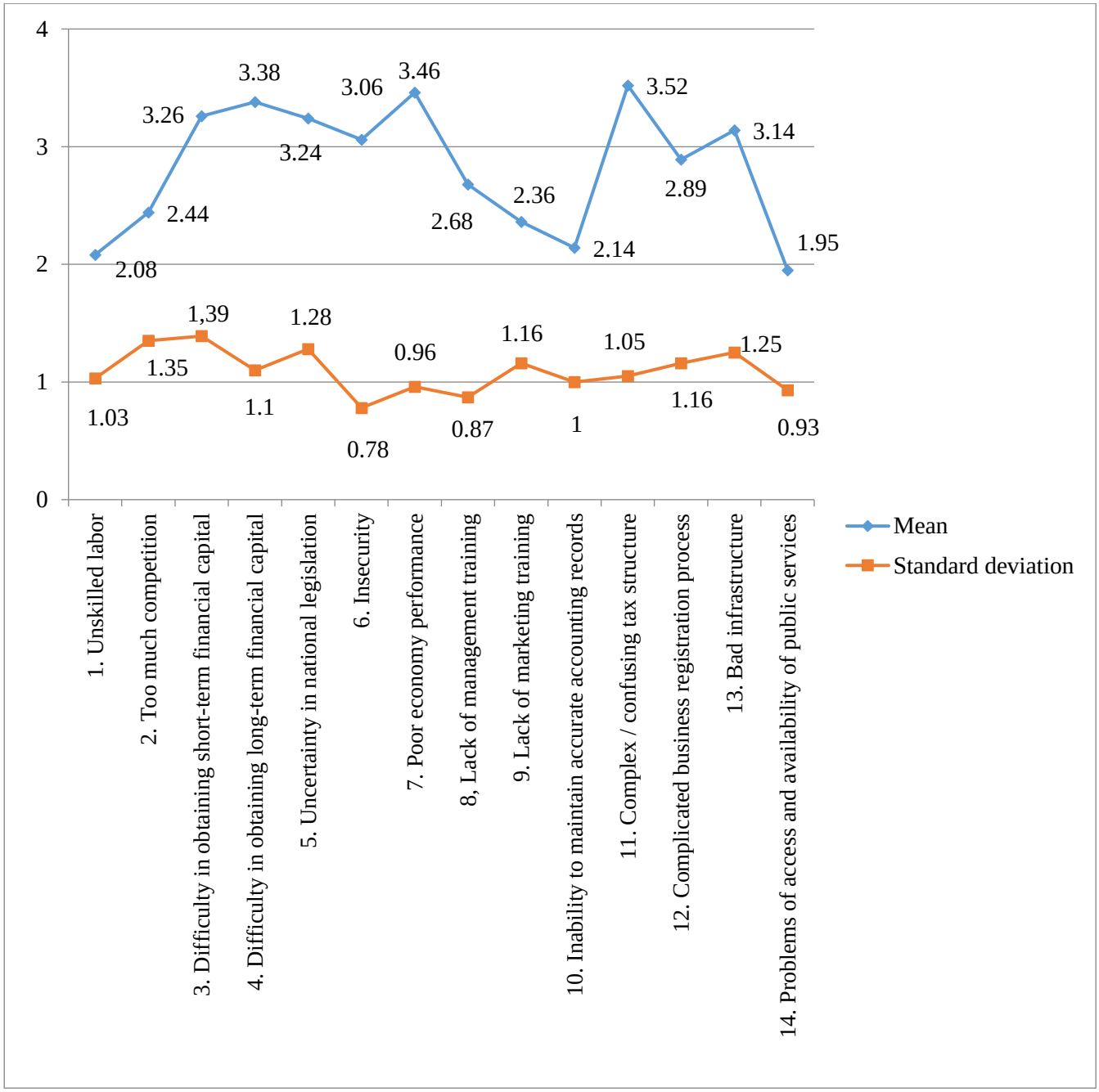

Figure 1. Descriptors of problems faced by entrepreneurs.
Source: Own elaboration based on Benzing *et al*. (2009)

DISCUSSION

Although the GEM conducts periodic surveys to study entrepreneurship in several countries, the scientific literature remains interested in determining the factors that influence it. For example, when comparing entrepreneurship factors of Mediterranean countries with those of African countries, Mine *et al*. (2019) found as differentiators: 1) the entrepreneur's skills and knowledge; 2) the financial and market opportunities that the environment provides to the entrepreneur; 3) the entrepreneur's management of failure, and 4) gender, because in the African countries studied, women had no participation.

In this same sense, the studies of Castaño *et al*. (2015), when comparing European countries with those of Latin America, concluded that there are significant differences in variables that affect entrepreneurship such as culture, social factors, and the economic environment. Also, in Japan, it has been determined that although small cities

promote entrepreneurship more, large cities tend to benefit more from entrepreneurship (Nakamura, 2019). On the other hand, the research by Aparicio *et al*. (2016), in 43 countries over 9 years, allowed us to identify that the opportunity venture is favored to a greater extent by informal institutions rather than by formal ones. This same research deduces that entrepreneurship positively impacts economic growth in Latin America; however, the countries of this region must strengthen their fight against corruption, confidence in entrepreneurs' skills, and opportunities to access private credit.

Because of the current concern for the preservation of the environment, the study of sustainable entrepreneurship has awaken academia's interest. In this field, Koe *et al*. (2015) identified that the pressure for compliance with environmental laws does not influence the propensity for sustainable entrepreneurship in SMEs. However, the same authors identified that personal factors of entrepreneurs such as their attitude and perception towards caring for the environment have a significant influence on the propensity for sustainable entrepreneurship in SMEs.

The results of this empirical research based on the 2016 GEM study for Colombia include the following most relevant aspects: The critical success factors associated with the organization's environment are 1) having a good product or service; 2) having a competitive price; 3) having good financial management and business networks; 4) managing the supply chain, and 5) good strategic planning. The success factors associated with the personality of the entrepreneur are 1) honesty and 2) good reputation. The institutional factors that do not favor entrepreneurship in Colombia comprise 1) limited financial support for entrepreneurial activity and 2) limited support of state entities.

Regarding the most frequent inconveniences that MSMEs entrepreneurs in Colombia must deal with, this research shows that they are mostly environmental. Most of the MSMEs entrepreneurs identified that the high volatility of the Colombian economy increases the possibilities of business failure, mainly during the first five years. Likewise, the entrepreneurs who participated in this research identified that the country's instable legislation due to frequent changes in institutional regulations generate high expenses. Finally, MSMEs entrepreneurs in Colombia highlight as a major problem for the success of their organizations the lack of access to cheap credit both in the long and short term because of limited government support for these small businesses. These results are consistent with the findings of the GEM study for Colombia (GEM, 2016). In general, the results of this research are partly consistent with those obtained by other studies involving populations from different countries (Aparicio *et al*., 2016; Mine *et al*., 2019).

CONCLUSION

The results of this study allow us to conclude that in a manner consistent with the results of the GEM study for Colombia about the motivations for creating companies by taking advantage of opportunity and necessity, the managers' perceptions indicate that their main motivations are to improve their income and to ensure long-term job stability. These factors are vital in developing countries characterized by low employment rates and high job uncertainty.

According to the perceptions of the managers participating in the study, the most important environmental factors that favor the success of their activities have to do with having a good product or service at a competitive price, financial and business network management, supply chain management, and good strategic planning; whereas the entrepreneur's characteristics with greater impact on the success and survival of their startups was associated with honesty and good reputation. On the other hand, the most relevant problems that affect the entrepreneurship activity and startup survival in Colombia were associated with poor economic performance, uncertain legislation and tax matters, and the difficulties in accessing short- and long-term funding.

It is important to clarify that when making generalizations based on the results of this study, we should be prudent due to limitations such as the sample that for now includes only a small geographic space of the Colombian territory. So, it may be necessary to expand the sample size and include different entrepreneur conglomerates. Also, the cross-cutting nature of the research implies that the entrepreneurs' perceptions can change over time. As future research lines, we have identified the study of the impact of factors such as geographical location within Colombia, the entrepreneur's gender, age and educational level, and the startup economic sector on the startup success beyond the first two years of operation, so these analyses could be compared with GEM studies.

Conflict of Interest Statement

The authors of this paper state that we are independent with respect to financing and support institutions. Besides, the authors state that during the conduct of the research or the writing of the manuscript, there have been no interests or values different from those usually followed by any

research or academic work.

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